Getting to Know Public Health Services Data Workshop

May 19, 2006

9 am - 1 pm

County of San Diego, Heath and Human Services Agency, Public Health Services

Introduction

Nancy L. Bowen, M.D., M.P.H. Mona Thabit, MPH **Public Health Services**

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Today's Agenda

- · Role of Public Health
- · Basic Information on Data Types & Measures
- Specific Public Health Services Databases
- Using Public Health Data
- Role of Community Health Statistics (CHS) Unit

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Role of Public Health

 How many of you think about how Public Health affects your life on a daily basis?

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A Day In Your Life With Public Health

San Diegans are able to live longer and healthier, thanks to the efforts of state, local and federal public health agencies.

The alarm clock buzzes. Stumbling out of bed, you head for the shower and then brush your teeth. The water coming out of the faucet is clean and safe to use, thanks to public health.

6.50 am.
After waking your children you go to the kitchen. Mornings are rushed, but you have heard public health messages about the importance of a healthy breakfast. You set out milk, fresh fruit, cereal and whole grain muffins.

Pulling on coats and gathering bags, your family heads for the car. Fastening seatbelts is an automatic habit. Public health helped pass California's seat belt and child car seat laws and promotes their use to save lives and prevent serious injuries.

After leaving your children at school, you drive on to work. As you enter the door, you notice that a new "Smoke Free Building" sign has been posted. For years, public health has been educating people about the deadly health effects of tobacco and second hand smoke.

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10:49 am.

Your sister calls. She and her new baby have just returned from the pediatrician. The six-week check up was great! Public health promotes early prenatal care for all pregnant women. It also ensures that every baby born in Callifornia gets a newborn screening to test for 28 metabolic disorders, which, if untreated, can lead to developmental disability, illness or even death.

A Day In Your Life...

10:45 am:

12:00 pm:
You change into tennis shoes and head out the door for a brisk walk. You feel good because you and three of your colleagues have started a walking program. Public health studies have shown that people who exercise regularly live longer and have healthier lives, with less chronic disease.

For lunch you stop at the cafeteria and make a quick trip through the salad bar. You naturally assume the food is safe to eat, because environmental health oversees the inspection and licensing of restaurants.

Back at work, you hear the sound of sirens as an ambulance hurtles past your building. Thanks to public health it is fully equipped, the paramedics are certified and a trauma system is in place to ensure that critically injured persons will have the best possible chance of survival.

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A Day In Your Life

5:00 pm: Another day ends. You start your car and the radio comes on. You hear a public service announcement advising parents to make sure their two-year olds have all their shots. Public health promotes early childhood immunizations to protect toddlers from serious, sometimes crippling and even fatal childhood diseases.

5:15 pm: You pek up your children and head for home. They want to ride their bikes and you remind them to wear their helmets. Public health was part of the coalition that helped pass California's Bike Helmet Law. Since then, helmet use by children under 16 has doubled. Helmets have been shown to reduce the risk of brain injury by 85 percent.

6:30 pm: You call your family to dinner, and tell them to be sure to wash their hands before eating. Public health teaches that proper hand washing is a primary protection against disease and prevents the

7:00 pm:
The evening news tells of a mysterious disease outbreak among visitors at a large San Diego convention. Thankfully, the illness is under control. Public health authorities say improvements and better coordination with other organizations, all made under the state's federal bioterrorism grant, helped them control the outbreak quickly.

- 10:00 pm:
 It is time for bed and your family drifts off to sleep. Public health has touched your lives in countless ways today, working behind the scenes to keep you all safe and sound.

 * Adapted from the Oregon Department of Human Services

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Public Health Services Data

- A Day in Your Life with Public Health is an excellent example of the impact of Public Health in one's personal life.
- There are many ways that public health data plays a role in the activities described such as, monitoring health status to identify health problems and improvements as well as to diagnose and investigate health hazards in the community.

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Public Health Services Data

- · As public health professionals, data is essential to assess and monitor health problems, implement and evaluate educational programs, develop comprehensive policies, administer community-wide services and plan for emerging health issues
- · Today's training will help you learn more about the public health data available, how to access it and how to use it

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Community Health Statistics Unit Rationale & Mission

- This unit was established in August 2004 to respond to community requests for one central office to access public health services data, the "One Stop Shopping" approach.
- To provide health data to meet the needs of community partners and Health & Human Services (HHSA) agency staff.

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Thank You!

- Thank you for the positive response to this training - we hope to meet your needs and make this an informative and beneficial experience
- This training is a collaborative effort with representatives from all Public Health Services Branches - thank you for sharing your expertise

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Data Types and Measures: Understanding Data

Leslie Upledger Ray, PhD(c) MPH, MPPA, MA EMS, CHS

The Essential Questions

- Who?
 - Age or age group
 - Gender
 - Race/ethnicity
 - Other identifying characteristics
 - · Licensed drivers
 - · Participants in a specific class

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The Essential Questions

- What happened?
 - Nature of illness/injury (ICD10 Codes)
 - Cause of Death (since 1999)
 - Nature of illness/injury (ICD9 Codes)
 - · Breast cancer
 - Femur fracture
 - External cause of injury (ICD9 E-codes)
 - Motor vehicle crash
 - · Fall from height
 - Health Services Contact (ICD9 V-codes)
 - Tuberculosis
 - · Infection with drug-resistant microorganisms

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The Essential Questions

- Where did the illness/injury occur geographically?
 - Street address
 - Specific road/highway
 - Zip code
 - City
 - HHSA region
 - State
 - Other place location

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The Essential Questions

- When did the illness/injury occur?
 - Time of day
 - Day of week
 - Month
 - Year
 - Other temporal identifier
 - During travel to/from school hours
 - · Number of days after foreign travel

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The Essential Questions

- Why did the illness/injury occur?
 - Human factors
 - Unprotected sex
 - Driver distracted by rear seat passengers
 - Environmental factors
 - Rain on roadway
 - · Drought causes increase in airborne spores
 - Engineering factors
 - · No street lights on roadway
 - Condensation accumulation in HVAC system

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The Essential Questions

- How did the illness/injury occur?
 - Biomechanics
 - Unrestrained passenger partially ejected from vehicle during rollover, head contact with pavement, massive head injuries
 - Circumstances
 - Food service worker did not wash hands transmitted Hepatitis A to restaurant patrons

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Dual Definitions

- Significance
 - The degree to which a result is meaningful
- - The number of new events in a given population during a given time period
- Prevalence
 - The number of events in a given population at a given time
- Normal
 - A continuous probability distribution
- Sample
 - A selected subset of a population

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Understanding Data

- · Numbers tell you how many
 - 25 children under age 15 in San Diego died of cancer in 2001
 - The equivalent of one classroom
- · Percents tell you a proportion of the whole
 - 90% of attendees who ate potato salad at a picnic experienced vomiting and diarrhea

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Understanding Data

- Rates tell you how many per a given population and allow you to compare year to year or group to
 - The rate of children injured in MVC dropped from 321.9 per 100,000 to 295.2 per 100,000 after the implementation of the program

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Types of Databases

- Population-based
 - Virtually everyone with the illness/injury is included
- Inclusion varies by database
- Service or Use Data
- Client data
 - Results apply to your service population
- May not apply to all population with specific illness/injury
- Sample or Survey
 - Statistical sample

 - Representative of the population
 Results can be applied to the population
 - Convenience sample
 - Not representative of the population
 - Easy to obtain
- Useful Non-Health Data
 - Demographic or Census
 - Law enforcement

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Specific Databases

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Useful Non-Health Data

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SANDAG Demographic Data

Beth Jarosz SANDAG

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SANDAG Data: Why

- Provide population size and demographics to predict health service needs
- Used to calculate rates which are necessary to compare health issues over time and to track population trends

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SANDAG Data: Who & What

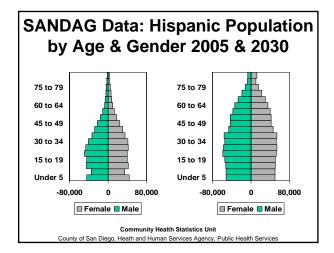
- · Who is included in the database
 - Entire San Diego region population
 - Households and housing units
 - Johs
- · What information is in database
 - Demographics: age, race/ethnicity, gender
 - SES Characteristics: occupation, education, housing characteristics, income and poverty, family structure, household characteristics

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SANDAG Data: Where & When

- · All of San Diego County, by
 - Census tract
 - Zip code
 - Subregional Area (SRA)
 - County
- Census every 10 years
 - American Community Survey, more data on an annual basis beginning September 2006
- Estimates yearly
- Forecasts 5 year increments to 2030

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SANDAG Data: Current/Future Uses

- Online
 - Data: http://datawarehouse.sandag.org/
 - Reports: http://profilewarehouse.sandag.org/
- · Planning & development
 - Expanding amount of data available at parcel level
- Other
 - Special tabulations and custom requests available through SANDAG's Service Bureau

Automated Regional Justice Information System (ARJIS) Data

Beth Jarosz SANDAG

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ARJIS Data: Why

- Centralized regional database for <u>law</u> enforcement to:
 - Solve crimes
 - Identify offenders
 - Notify officers of alerts
 - Standardize crime statistics
- · Promotes data sharing between agencies
- Cleansed data is used for the <u>public</u> web-based crime mapping & statistics

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ARJIS Data: Who & What

- Regional crime report database (law enforcement only)
 - Arrest reports, crime cases, traffic accidents, pawn slips, moving citations
 - Submitted by region's 10 police/sheriff agencies
 - Accessed by 11,000 users at 70 local, state and federal agencies
 - 100,000 transactions / month average

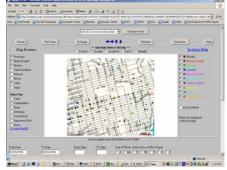
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ARJIS Mapping Data: Where & When

- All of San Diego County, by
 - Address (approximated on map)
 - Zip code, City, County, Neighborhood, Police Beat, Supervisor & Council Districts
 - Date, time and day of week
- 90 days data available
- 20,000 hits/ month average

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ARJIS Data: Crime Map



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ARJIS Data: Current/Future Uses

- Public website: www.arjis.org
 - Customized crime maps
 - Crime statistics/reports
- eWATCH register for daily email update of crimes near an address (City of SD only at www.sandiego.gov)
- Domestic Violence Communication System (not available to public)
 - Promotes information sharing in the DV community (shelters, batterer's treatment providers, law enforcement agencies)

State-wide Integrated Traffic Records System (SWITRS) Data

Alan Smith, Ph.D., M.P.H. Emergency Medical Services

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SWITRS Data: Why

- Great for getting an idea of the number of people injured or killed in motor vehicle crashes
- Prevent motor vehicle, motorcycle, pedalcycle and pedestrian injuries
- Promote and encourage healthy and safe driving behaviors

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SWITRS Data: Who & What

- Anyone involved in motor vehicle related injury on a public roadway in San Diego County
- Demographics
- Event location
- Environment (road, weather conditions), circumstances (drunk driving, distracted driving), seat belt use
- · Victim, party, and crash levels

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SWITRS Data: Where & When

- Exact event location available through July 2003
 - Intersection & offset (mid block)
 - Grouped to zip code
- 6 month lag; quarterly data transfer from California Highway Patrol

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CRASHES IN CLOSE PROXIMITY TO NORTH COUNTY CASINOS FY 0203 163 CLOSE PROXIMITY CRASHES Paia Pauma Valley View Case hours and services County of San Diego, Heath and Human Services Agency, Public Health Services

SWITRS Data: Current & Future Uses

- Annual report online:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetai ls.asp?ServiceID=571
- Prevention & control programs
- Grants

Questions on non-health data?

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Population-based Databases

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Birth Data, Fetal Death Data, Infant Death Data

Sutida (Nid) Jariangprasert, M.P.H.

Maternal, Child and Family Health Services

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Birth, Fetal & Infant Death Data: Why

- · Identify trends & disparities, develop interventions
- Ensure women are healthy and have access to health care and other resources
- · Ensure babies are born healthy
- · Prevent fetal & infant mortality

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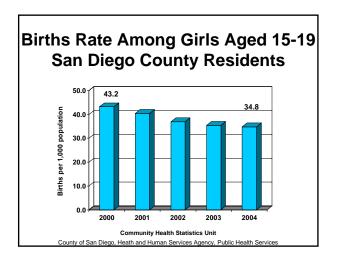
Birth Data: Who & What

- Live births: to county residents (including occurrence outside the county) and births that occurred in the county
- **Demographics:** mother's age, race/ethnicity, education level, marital status; father's demographics; infant's gender
- Topic specific: fertility rate, prenatal care, preterm, low birth weight, method of delivery

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Birth Data: Where & When

- · All of San Diego County, by
 - Zip code
 - City
 - HHSA Region
- Calendar years 1990 through 2004
- Lag time is about 6 months after the end of the year



Fetal Death Data: Who & What

- Deaths prior to birth, or stillbirths of 20 weeks gestation or more
- Reporting is NOT complete
- Demographic: mother's age, race/ethnicity, education level; father's demographics; fetus' gender
- Topic specific: fetal mortality, prenatal care, length of gestation, cause of death

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Fetal Death Data: Where & When

- · All of San Diego County, by
 - Zip code
 - HHSA Region
- Calendar years 1989 through 2003
- Lag time is about 9 months after the end of the year

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Fetal Death Rate by Race/Ethnicity San Diego County Residents, 2003

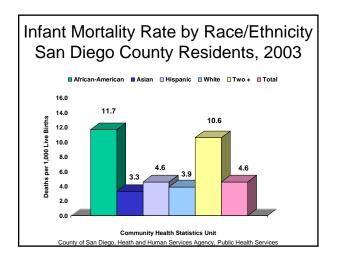
Infant Death Data: Who & What

- Deaths among county residents (including occurrence outside the county) and deaths that occurred in the county
- **Demographics**: infant's race/ethnicity, gender, age
- **Topic Specific:** infant mortality (including neonatal, postneonatal), cause of death

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Infant Death: Where & When

- All of San Diego County, by
 - Zip code
 - City
 - HHSA Region
- Calendar years 1990 through 2004
- Lag time is about 9 to 12 months after the end of the year



Birth, Fetal & Infant Death Data: Current & Future Uses

- Identify areas of need and develop intervention strategies
 - CDC's Perinatal Periods of Risk
 - Target outreach to
 - zip codes with high number of births to African-Americans
 - communities with high rates of late start of prenatal
 - Estimate size of target population for planned or potential interventions

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Death Certificate Data

Jennifer Nelson, M.P.H.
Community Epidemiology

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Death Data: Why

- Track deaths attributable to specific causes (including diseases, conditions, accidents, etc.)
- Determine leading causes of death countywide and for specific regions and population groups
- · Assess trends in mortality
- · Measure health disparities
- Assess the health of the community and measure health outcomes

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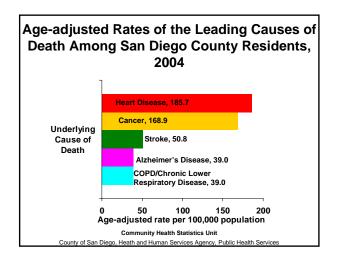
Death Data: Who & What

- · Recorded deaths of
 - San Diego County residents
 - Residents of other locales whose death occurred in San Diego County
- Demographics: age, race/ethnicity, gender, marital status, education
- · Geography: zip code, city, state of residence
- Underlying cause of death, date of death, place of death

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Death Data: Where & When

- Deaths occurring in San Diego County and deaths of San Diego County residents in other locales
- · Location of residence by zip code, city, state
- Ongoing data collection
- Reports available online, annually in spring for deaths occurring 2 years prior (e.g., reports on deaths occurring in 2004 are available online in spring of 2006)



Death Data: Current & Future Uses

- Annual tables online:
 - www.sdepi.org

(select Epidemiology - Statistics and Reports)

- Prevention & control programs
 - Planning
 - Evaluation

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PreHospital Database

Barbara Stepanski, M.P.H. Emergency Medical Services

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PreHospital Data: Why

- The County of San Diego Prehospital database is a great resource that allows for county-wide surveillance and analysis of injuries and illnesses. This provides data for:
- -System oversight
- -Response to disasters
- -Community based organizations
- -Research
- -Grant writing

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PreHospital Data: Who & What

- The Prehospital database is population based; it includes patients responded to by Emergency Medical Technicians (EMTs) and/or Paramedics via the 911 system in San Diego County.
- · Some information in this database includes:
 - date and time of incident
- chief complaint
- treatments provided
- acuity
- prehospital outcome
- restraint use
- category of incident location
- injury type

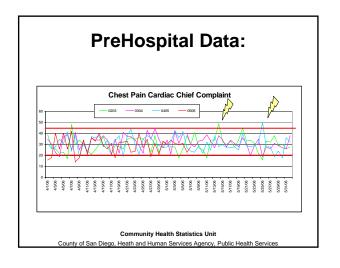
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PreHospital Data: Where & When

- All of County of San Diego by zip code*
- Ongoing (real-time) data collection
- · Historical reports available online
- Specific reports available by request

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PreHospital Data: Current & Future Uses

- Annual report online:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetails.asp?ServiceID=544
- · Various system reports and surveillance
- Research/Projects
- Prevention & control programs

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Emergency Department Discharge Data

Holly Shipp, M.P.H.
Emergency Medical Services (EMS)

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Emergency Department (ED) Data: Why

- · Great for describing:
 - the demographics of ED discharge patients
 - what diseases, conditions, or injuries patients are treated for & discharged from the ED
 - possible information on the use of ED for nonemergent or primary care treatable medical conditions
 - health & service areas that may need additional urgent & primary care services

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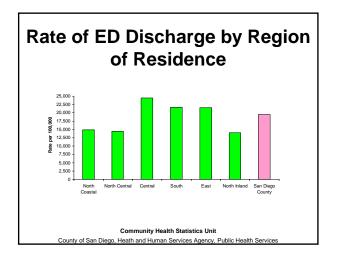
ED Data: Who & What

- All patients treated and discharged from civilian EDs in San Diego County
 - Patients admitted to hospital from the ED are not included (i.e. most severe cases)
- Demographic variables: age, race/ethnicity, gender, zip code of residence
- Service date, patient disposition, expected source of payment
- Principal & other diagnosis, principal & other Ecode (mechanism of injury)

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ED Data: Where & When

- Zip code level
- Currently: >97% of San Diego County ED discharge patients
- Future Goal: 100% of San Diego & Imperial Counties
- · Data: Quarterly reporting, 3 month lag
- · Reports: Quarterly



ED Data: Current & Future Uses

- · Quarterly reports online:
 - www.sdchip.org
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetails.asp? ServiceID=571
- ED use algorithm identify ED utilization for nonemergent or primary care treatable medical conditions
- Trends to determine regional priorities

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Trauma Registry

Alan Smith, Ph.D., M.P.H. Emergency Medical Services

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Trauma Data: Why

- Great for getting an idea of who has been hospitalized as a result of severe injuries
- · Prevent injuries
- Protect against environmental hazards
- Promote and encourage safe and healthy behaviors
- Assure the quality and accessibility of health services

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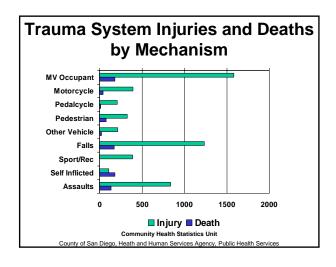
Trauma Data: Who & What

- Patients seen at San Diego County Trauma Centers
- Demographics
- · Zip code of residence
- Event date/time, possible prehospital information, diagnosis, injury E-code, treatment/surgery, survival outcome

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Trauma Data: Where & When

- Zip code of residence
- · Zip code of occurrence (limited)
- Ongoing data collection
- Annual reports available online, 1 year lag



Trauma Data: Current & Future Uses

- Annual report online:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetai ls.asp?ServiceID=527
- Prevention & control programs
- Trauma System quality improvement

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Hospital Patient Discharge Data

Lacey Hicks, M.P.H.
Community Epidemiology

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Hospital Discharge Data: Why

- Track hospitalizations attributable to specific causes (including diseases, conditions, accidents, etc.)
- Determine leading causes of hospitalization countywide and for specific regions and population groups
- · Assess trends in hospitalizations
- Measure health disparities
- Assess the health of the community and measure health outcomes
- Estimate disease/condition burden on community through total charges and length of stay of hospitalizations

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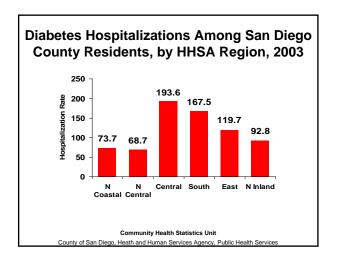
Hospital Discharge Data: Who & What

- Each inpatient discharged from a California licensed acute care hospital in San Diego County
 - 2003 dataset includes over 300,000 records
- · Demographics: age, race/ethnicity, gender, zip code
- Clinical information: diagnosis (ICD-9-CM), injury (E-Codes), length of stay, disposition of patient, total charges, expected source of payment

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Hospital Discharge Data: Where & When

- San Diego County by patient zip code
- Ongoing data collection by the California Office of Statewide Health Planning and Development (OSHPD)
- Dataset available annually, approximately 12 months after the calendar year has ended



Hospital Discharge Data: Current & Future Uses

- · Reports online:
 - Local

http://www2.sdcounty.ca.gov/hhsa/ServiceDetalls.asp?ServiceID=147

- California State

http://www.oshpd.ca.gov/

· Prevention & control programs

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Medical Examiner (ME) Data

Alan Smith, Ph.D., M.P.H. Emergency Medical Services

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ME Data: Why

- Great for getting an idea of non-natural causes of death
- · Prevent injuries
- Promote and encourage healthy behaviors and good mental health
- Assure the quality and accessibility of health services

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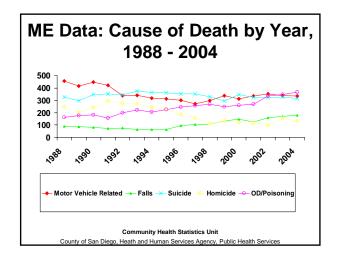
ME Data: Who & What

- Non natural deaths
- Sudden deaths
- · Deaths not certified by physician
- Demographics
- · Zip code of residence
- Event location
- Cause of death, investigative report, autopsy, toxicology, pathology, medical/surgical history

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ME Data: Where & When

- All of San Diego County by zip code of residence
- Ongoing data collection, ~6 months to close case
- · Monthly data transfer from ME to EMS
- Annual reports available online as a component of other topic-specific reports (e.g., trauma, suicide)



ME Data: Current & Future Uses

- Annual reports online, Trauma & Suicide:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetai ls.asp?ServiceID=571
- Prevention & control programs
- Grants

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Questions on population-based health data?

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Special Group or Service Databases

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California Outcome Measurement System (CalOMS)

Scott Belfield
Alcohol and Drug Services (ADS)

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CalOMS Data: Why

- · Great for getting an idea of
 - Who is using alcohol & drug treatment services
 - Background of drug & alcohol users
- Promote and encourage healthy behaviors and good mental health
- Assure the quality and accessibility of health services

CalOMS Data: Who & What

- All persons who seek services at San Diego County alcohol and drug treatment facilities

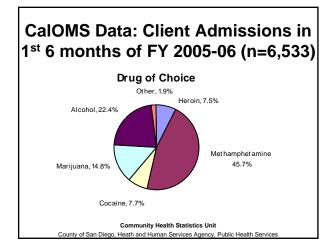
 public facilities only
- · Demographics, zip code of residence,
- Drugs used, age at first use, number of treatments, pregnancy, minors

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CalOMS Data: Where & When

- All of San Diego County, by zip code of residence
- · Annual reporting, 1 year lag

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CalOMS Data: Current & Future Uses

- · Website:
 - www2.sdcounty.ca.gov/hhsa/ServiceCategoryD etails.asp?ServiceAreaID=15
- Prevention & control programs
- Trends to determine regional priorities

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HIV Counseling and Testing Data

Lorri Freitas, M.P.H.
HIV/AIDS Epidemiology/ Community Epidemiology

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HIV Counseling and Testing Data: Why?

- To examine the HIV infection rate of high-risk populations in San Diego County
- Track trends over time (1990-2005)
- Look for changes in populations most affected
- Look for changes in mode of transmission
- Examine behaviors of groups with higher infection rates
- In-house use: plan outreach, hours of operation, location of sites for HIV testing
- Used along with other sources of data for HIV prevention and planning activities

HIV Testing Data: Who & What

- · Anyone seeking HIV testing at County or Countycontracted test sites
- · Demographic: age, gender, race/ethnicity
- Behavioral: sexual orientation, number of sexual partners, gender of partners, sexual behaviors
- · Testing: reason for testing, number of prior HIV tests, test type, test result

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HIV Testing Data: Where & When

- · All of San Diego County
- · Health Service Regions
- · Zip code possible
 - Not reported if less than 5 tests or other confidentiality concerns
- Data lag time ~4-6 months, generally reported annually
- · Ongoing data collection
- Reports available online, annually in summer Community Health Statistics Unit

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HIV Anonymous Testing Rate per 100 Testing HIV Positive by Gender San Diego County, 1990-2005* Females — Males 5 2.3 2.6 2.8 2.7 3.0 4 3 2 Community Health Statistics Unit

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HIV Testing Data: Current & Future Uses

- Annual report online:
 - www.sdhivaids.org
- Prevention & control programs
- · Grant applications

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HIV/AIDS Reporting System Data

Samantha Tweeten, Ph.D., M.P.H. HIV/AIDS Epidemiology/ Community Epidemiology

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HIV/AIDS Data: Why

- Provide information for planning/decision making
 - Direct care, prevention programs, other assistance
 - Increases in some groups may help target prevention efforts
- · Provide data to the State Office of AIDS
 - Impacts federal funding
 - Data (anonymized) sent to CDC

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HIV/AIDS Data: Who & What

- Any San Diego County resident diagnosed in San Diego County. San Diego County residents diagnosed elsewhere may be included
 - All HIV cases reported after 4/17/06
 - All AIDS cases reported after 1981
- · Demographic
- · Risk group/Patient history
- · Laboratory data
- · Opportunistic infection data

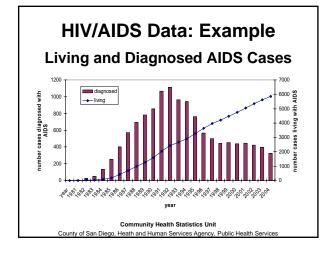
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HIV/AIDS Data: Where & When

- · County, Region, possibly zip code
- · Ongoing data collection
- · Reports available online
 - Annual Report
 - Subpopulation Reports (i.e. women, Blacks etc)

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HIV/AIDS Data: Current & Future Uses

- Annual report online:
 - www.sdhivaids.org
- · Prevention & control programs
- · Grant applications

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Sexually Transmitted Diseases

Marjorie Lee, M.P.H. HIV/STD/Hepatitis Branch

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Sexually Transmitted Disease (STD) Data: Why

- Determine the incidence and distribution of reportable STDs in San Diego County
- Examine STD incidence by area, gender, age, and race/ethnicity
- Detect outbreaks and clusters
- · Direct intervention efforts
- · Plan for STD health services
- Promote and encourage safe and healthy behaviors
- Assure the quality and accessibility of health services

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STD Data: Who & What

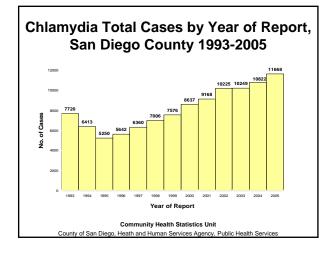
- All reported cases of syphilis, gonorrhea and chlamydia from providers and laboratories in San Diego County
- · Number of cases
- Demographics: Age, Gender, Race/Ethnicity

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STD Data: Where & When

- · Zip code specific data
 - 30% of cases missing zip code
- · Ongoing data collection
- · Reports available online, annually in spring

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STD Data: Current & Future Uses

- · Annual Fact Sheet online:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceCategoryDe tails.asp?ServiceArealD=105
- · Prevention & control programs
 - Focus interventions based on data
 - Example: Location of STD clinics
- Other
 - Sampling to get more information on Gonorrhea
 - Improve reporting

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Tuberculosis Case Database

Marisa Moore, M.D., M.P.H.
Tuberculosis Control

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Tuberculosis (TB) Data: Why

- Describe the annual incidence of TB
- · Monitor success of prevention and control efforts
- · Identify risk groups for targeting prevention efforts

TB Data: Who & What

- · New confirmed cases of TB in San Diego County
- · Basic demographics
- · Clinical presentation and drug resistance
- Risk factors (e.g., drug use, homelessness)
- Treatment outcome

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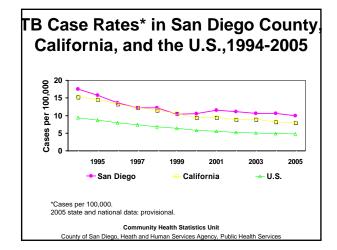
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TB Data: Where & When

- · San Diego County
 - City
 - Zip code
- 1993 present
- Fact Sheet, trend tables, and annual report online, available spring following year

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TB Data: Current & Future Uses

- Fact sheet, trend tables, annual report online:
 - www.sandiegotbcontrol.org
- · Evaluate success of control efforts
- · Target and evaluate prevention efforts

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Childhood Lead Poisoning Prevention Program (CLPPP) Lead Data

Lacey Hicks, M.P.H.
Community Epidemiology

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Lead Data: Why

- Great for getting an idea of how many San Diego County children are tested for lead and of these, how many are lead poisoned
- Find out which healthcare providers are ordering lead tests
- Explore possible sources of lead poisoning

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Lead Data: Who & What

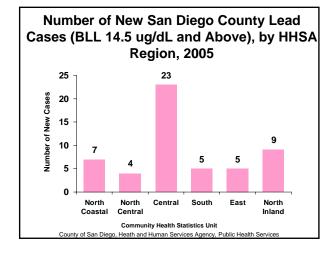
- San Diego County children under 21 years of age who have been tested for blood lead levels
- Child demographics, blood lead levels, sample types, healthcare provider, possible sources of exposure (for managed cases)

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Lead Data: Where & When

- · San Diego County, by
 - Patient address
 - Zip code
- · Reports available on request
- · Ongoing data collection by CLPPP
 - By California law, all laboratories are required to submit lead results to the State Childhood Lead Poisoning Prevention Branch, who distributes the data to local lead programs

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ead Data: Current & Future Uses

- Online:
 - http://www2.sdcounty.ca.gov/hhsa/ServiceDetai ls.asp?ServiceID=147
- · Biannual report to State
- · Prevention & control programs

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Reportable Disease Data

Deirdre Browner, M.P.H. Community Epidemiology

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Reportable Disease Data: Why

- Prevent or limit communicable disease outbreaks with early event notification
- Calculate the incidence and prevalence of communicable diseases for San Diego County
- Advise the public on general measures to prevent communicable disease

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Reportable Disease Data: Who & What

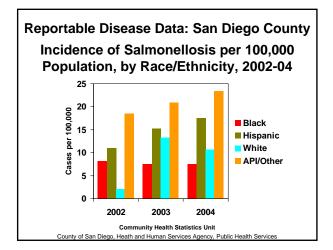
- Any individual who has been diagnosed with a reportable infectious disease in San Diego County and whose healthcare provider submitted a Confidential Morbidity Report (CMR) to Public Health
- Name, Age, Gender, Race/Ethnicity, Disease, Date of Diagnosis, Lab test results

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Reportable Disease Data: Where & When

- All of San Diego County, by
 Zip code
- · Data are submitted as the case is diagnosed
- · Reports available online, annually in spring

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Reportable Disease Data: Current & Future Uses

- · Annual tables and reports online:
 - www.sdepi.org
- Targeted education programs for institutions
- · General education for the public
- Collaborate with state and federal officials on changes in existing regulations

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Immunization Data

Wendy Wang, M.P.H.
Immunization

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Immunization Data: Why

- Great for getting an idea of who has vaccine preventable diseases (e.g. pertussis) and immunization coverage rates across life span
- · Prevent epidemics and the spread of disease
- Promote and encourage vaccinations among both providers and communities
- Assure the quality and accessibility of health services
- · Reinforce the California school entrance law

Immunization Data: Who & What

- Who depends upon dataset and may include:
 - Cases (reportable, vaccine preventable diseases)
 - Sample of San Diego residents
 - Clients received immunization services at PHCs, CHCs and private practices cross County
 - Sample of Kindergarteners
- Demographics
- · Disease histories
- · Vaccine histories
- Vaccine attitudes

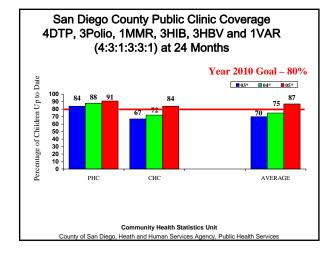
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Immunization Data: Where & When

- Most data available at county level
- Ethnicities data available
- Annual reports, depending on survey schedule

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Immunization Data: Current & Future Uses

- · Online:
 - http://www.immunization-sd.org/eng/datastatistics.html
- Collaborate with Regional HHSA staff to explore regional specific information

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Questions on special group & service data?

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Survey Databases

California Health Interview Survey (CHIS) Data

Deirdre Browner, M.P.H. Community Epidemiology

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CHIS Data: Why

- Useful for determining what population groups have chronic diseases/conditions, health behaviors, health care access/use
- Promote and encourage healthy lifestyles and behaviors
- Assist community organizations in designing targeted interventions for high-risk populations

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CHIS Data: Who & What

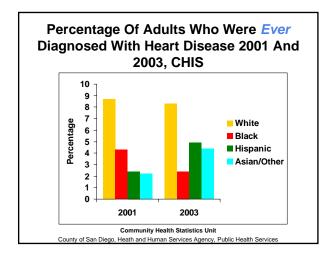
- The survey estimates percentages of the population affected for the entire County
- · Demographics, housing, employment
- Behaviors: diet, exercise, access/use of health care, health screenings
- Status: height, weight, chronic disease, general health

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CHIS Data: Where & When

- County level data for 2001 and 2003
- HHSA Region level data starting in 2005
- · Biannual survey
- · Some reports available online at CHIS website

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CHIS Data: Current & Future Uses

- Annual report online:
 - http://www.healthpolicy.ucla.edu/pubs/pubList.asp
- · Programs targeting high risk populations
- An oversample of San Diego County in 2005 will provide HHSA regional level data

Youth Risk Behavior Survey (YRBS) Data

Lacey Hicks, M.P.H. Community Epidemiology

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YRBS Data: Why

The YRBS questionnaire was developed to:

- Determine the prevalence of behaviors that put teens at risk for disease, injury and death
- Assess whether health risk behaviors change over time
- Examine the co-occurrence of health risk behaviors
- Provide comparable data among subpopulations of youth
- Provide comparable national, state, and local data
- Monitor progress toward achieving the Healthy People 2010 objectives and other program objectives

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YRBS Local Data: Who & What

- Sample of 9th through 12th grade students
- Voluntary & anonymous
- · Parental permission required
- i.e. 2005: 1,695 students in 33 public high schools in San Diego Unified School District
- · Behaviors:
 - Resulting in intentional and unintentional injuries
 - Alcohol and other drug use
 - Tobacco use
 - Sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies
 - Dietary behaviors

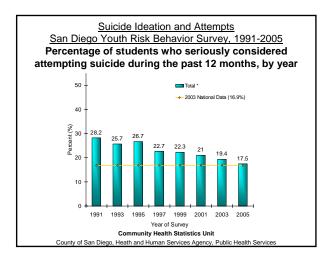
Physical activity
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 Sanires Agency.

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YRBS Data: Where & When

- · San Diego City Schools
- No geographic identifiers (i.e. no school name)
- The surveys are conducted every 2 years, usually during the spring time, since 1991
- · Local data are usually available during fall
- · Local reports are usually available during winter

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YRBS Data: Current & Future Uses

- Based on the data, the school district determines program direction, needed policy and student intervention
- Local YRBS data provides a self-reported health report card for high school students
- The district is able to track the effectiveness of current interventions
- The district is able to view trends from year-to-year and address issues of concern
- Reports can be obtained by contacting San Diego City Schools Physical Education Health and Athletics Department, (619) 725-7126, or online at http://www.sandi.net

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Questions on survey data?

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Using Public Health Data

Leslie Upledger Ray, PhD(c) MPH, MPPA, MA EMS, CHS

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How Do We Use Data

- -Education
- -Policy
- -Grants
- -Performance Measures
- -Program Evaluation
- -Prevention Activities

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How many?

- Numbers
 - A count, no denominator
- Percentages
 - A proportion of the whole
- Rates
 - A ratio with a fixed denominator

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What we can say about data: Interpretation #1

- "Among _____(who) in the study, ages
 ____, in ____ area (where), for ____ years
 (when), ____ % have ____
 characteristic (what)."
- "Among infants who died (under 1 yr), in San Diego County, for the 2001 birth cohort, 65% had low birth weight."

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What we can say about data: Interpretation #2

- "Compared to _____(who1) in _____ area (where), for _____ years (when), ____ (who2) have _____amount (magnitude) _____ more/less (direction) _____ characteristic (what)."
- "Compared to women of the same age in San Diego County for fy 99/00, men have more than 6 times higher rates of suicide, according to Medical Examiner data."

What we can't say about data: Limitations

- Who's missing from data
- · What's missing from data
- Bias

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Issues: Small Numbers

- Do not calculate rates on < 5 events.
 - Produces unstable rates
 - Aggregate 3 successive years of data

Rate =

(events in year 1 + events in year 2 + events in year 3) X

Population year 1 + population year 2 + population year 3

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The Essential Footnote

- Always document the source of your data as a footnote in your document or at the bottom of your table or chart
- Include the source of the data, the timeframe it represents and the name of the database
- Many databases offer suggested data source statements, use them
- Include notes on who modified the data or calculated statistics from the data

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The Essential Footnote

- The purpose of a footnote is to identify the source and other relevant information for the reader of your document
- The most important purpose of a footnote is to ensure that you will be able to figure out how you got the data next year when you have to reproduce it

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Perspective

- · What is your message?
 - Child pedestrians are at risk of injury around their schools, therefore we need a traffic light
 - Child pedestrians are at risk of injury around their schools, therefore we need to teach them to be safer pedestrians
- · Who is your audience?
 - Traffic engineering department
 - PTA, school
- How do you reach your intended audience?

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Time and Place Comparisons

- Consider the difference between the number of child pedestrians injured in a 24 hour period compared to a 12 hour period.
 - When are kids at risk for the behavior
- Limit your "where" to areas child pedestrians frequent like residential communities or schools
 - Where are kids most at risk for the behavior
 - Consider GIS/mapping to identify and illustrate the point

Shortest Stopping Distances At 20mph it takes 40 feet or 3 car lengths to stop. At 30mph it takes 75 feet or 6 car lengths to stop. At 30mph it takes 75 feet or 6 car lengths to stop. School zones require speeds of 25mph which means you must see a child step into your path about 60 feet ahead to be able to stop in time. At 70mph you need more than a football field to stop. Response Braking Community Health Statistics Unit County of San Diego, Health and Human Services Agency, Public Health Services

Why do we need data?

- Understand the extent of the problem.
- · Assess need.
- · Establish priorities.
- To compare to other communities, states, etc..
- Profile target populations.
- Understand the distribution of disease and injury.
- Surveillance
- · Give credibility to prevention efforts

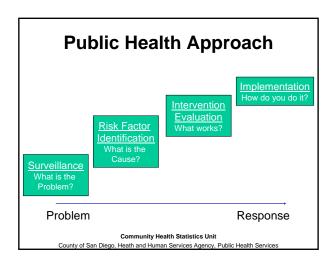
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In order to have a successful prevention program....

- You need to gather data to identify the problem
- You need to describe the problem in terms of risk and prevention
- You need to evaluate your prevention or intervention program to determine its impact
- You need to figure out how to implement it and institutionalize it

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Community Health Statistics Unit

Mona Thabit, M.P.H.
Julie Steele, M.P.H.

Community Health Statistics Unit

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Role of The Community Health Statistics (CHS) Unit

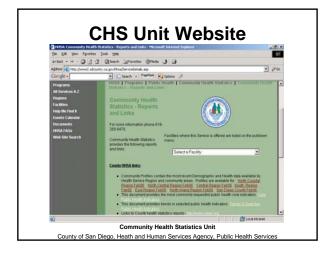
- "One Stop Shop" for health data
- Data Requests (619) 285-6479
- CHS Unit Website:

www.sdhealthstatistics.com

Website Data Products

- Core Public Health Indicators 9/04
- Trends in Selected Health Indicators 3/05
- Regional Community Profiles
- County Health Status Report 2005
- Important Links to Other Data Sources
- National Health Observance Articles collaboration with San Diego County Medical Society monthly magazine

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Examples of Data Requests

- 'Club Drug" use by youth in the County, and by region, for a grant proposal (ADS & YRBS)
- Cancer, diabetes, heart disease and HIV rates for a regional hospital to prioritize services to better serve community needs (Core Indicators)
- Number of live births, teen births, infant mortality and overall death rate, in a specific zip code, for a community needs assessment (Death & Birth data)

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Data Requests-Continued

- For youth, the number of deaths, suicides, ADS usage, teen births and firearm injuries, for specific zip codes, to develop an intervention for at risk youth (EMS, ADS and Death data)
- Number of women in San Diego County who are mail ordered or brokered brides, for coursework and potential future funding (federal report)
- In San Diego, the number of adults, infants and school-age children who are hearing impaired, for a grant proposal (School data, CHIS, SANDAG)

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Binder Information

- Rolodex Card & Flyer for Public Health Data Requests
- · Copy of all slides presented
- Database info sheet
- Index (Databases by topic)
 - For each topic/indicator, see page number for relevant databases
 - Page number of primary data sources in bold
 - i.e. want data on diabetes:
 - See databases: Hospital, ED, Death, CHIS, YRBS

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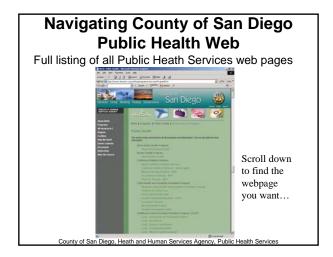
Navigating County of San Diego Public Health Web

Go to your favorite, easy to remember County site
– i.e. www.sdhealthstatistics.com

• Click on Public Health in grey at top









Questions?

- Evaluations
- Questions???

Contact Information:
Community Health Statistics Unit
6255 Mission Gorge Road
San Diego, CA 92120
www.sdhealthstatistics.com

Data Requests (619) 285-6479